Romania is enhancing its national radiological detection and monitoring capabilities with advanced detection techniques for nuclear safety incident management with support from the United States Department of Energy (US DOE).

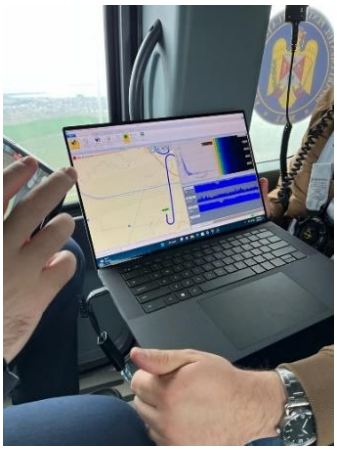
Under the framework of bilateral cooperation between National Commission for Nuclear Activities Control (CNCAN) and the U.S. Department of Energy/National Nuclear Security Administration's (DOE/NNSA) Office of Nuclear Incident Policy and Cooperation, a national training course centered around building regional capabilities in the field of radiological and nuclear incident preparedness and response was conducted in Constanta, Romania, from 23-27 January 2023. This training course – focused on aerial radiological survey methods and the installation/use of aerial measuring and detection systems – was supported jointly by 25 experts from the United States, Romania and Ukraine.

These experts consisted of radiological protection specialists, law enforcement personnel, and nuclear/radiological emergency responders. Romanian experts represented CNCAN, the Horia Hulubei National Research and Development Institute for Nuclear Physics and Engineering (IFIN-HH), the Cernavodă Nuclear Power Plant, the Ministry of National Defense, the General Aviation Inspectorate of the Ministry of Internal Affairs, and the Romanian Intelligence Service.

The training course was conducted through classroom and hands-on learning, as well as practical exercises to maximize learning potential. The aim of the course was to increase awareness and understanding of: the capabilities of aerial radiation measuring and detection systems; basic radiation detection theory; advanced alarms; airborne surveillance mission analysis, planning, and execution; and response aspects of implementing a graded approach to consequence management of radiological/nuclear accidents or incidents, including malicious acts that may occur at major public events.

The enhancement of national radiological detection and monitoring capabilities using mobile spectral detection techniques is taking place through the incorporation of new radiation detectors and remote monitoring software for the management of radiological or nuclear incidents. This radiation detection system can be mounted on a moving vehicle, on the ground or in the air, and used to: detect and determine a large area that may be affected in the unlikely event of a radiological/nuclear accident or malicious act; identify lost or stolen radiation sources; provide monitoring leading up to during and major public events; and allow for surveillance at border crossings.

The hardware and software equipment that the American participants brought to the training was left on a long-term loan to the CNCAN team. Together with equipment already at IFIN HH, Romania will now have mobile capabilities that can be integrated into the national radiological monitoring strategy.



The National Commission for the Control of Nuclear Activities (CNCAN) ensures that all nuclear activities are carried out in Romania under optimal conditions, contributing to the protection of the population, occupationally exposed personnel, patients, and, last but not least, the environment from the risks associated with nuclear activities. CNCAN contributes to the prevention of inappropriate risks to national safety, to the respect of international obligations assumed by Romania in this field, as well as to the transmission of information to ensure transparency in communication.