

## SUMMARY

This report presents the results of the International Physical Protection Advisory Service (IPPAS) mission provided by the IAEA at the request of the Norwegian Government. Following an announcement made by Norway during the 2013 IAEA Nuclear Security Conference in Vienna, based on the process from the Nuclear Security Summits in 2010 and 2012, an official letter was subsequently sent to the Director General of the IAEA on 24 September 2013 and a decision was made to conduct an IPPAS mission in 2015. The scope of the IPPAS mission, conducted on 5-16 October 2015, included the Government's legislation, regulations, and regulatory framework, the implementation of physical protection at the research reactors' nuclear sites of Halden and Kjeller, along with a review of the transport security measures and a review of computer security measures both at the regulatory and facility levels.

Physical protection in Norway consists of site, personnel, information and transport security. Norway has an extensive nuclear programme which has been operational since the 1950s. The scope of the mission was broad and covered more than simply physical protection; however, it had been agreed during the preparatory meeting that the security of other radioactive materials were out of the scope.

An international team of experts, from 6 Member States, and with a variety of expertise in different areas related to nuclear security and physical protection, conducted the review. The team interacted with personnel representing the Norwegian governmental organizations, as well as key management and staff from the nuclear operator. The topics covered during the review included relevant laws and regulations, roles and responsibilities of the competent authorities, especially of the regulatory body, requirements and guidance, licensing of nuclear facilities, and inspection and enforcement. At the sites visited, the team focused on the implementation of physical protection measures, including security management, security organizational structure, physical protection systems, personnel security, information and computer security, interfaces between security, safety and nuclear material accountancy and control, contingency and emergency planning, and transport security.

The IPPAS team conducted document reviews, interviews and site visits to gather relevant information. Due to issues around the sensitivity of certain information, the team had limited access to some documents such as the Design Basis Threat (DBT).

The team compared the information gathered with the recommendations and guidance contained in the IAEA Nuclear Security Series (NSS), which were used as the basis to provide recommendations and suggestions, and to identify good practices. **Recommendations** are derived from a direct comparison of the civil nuclear security policies and practices of the State and the facility level implementation with the fundamental principles defined in the Convention on the Physical Protection of Nuclear

Material 2005 Amendment and the recommendations in NSS 13. **Suggestions** for improvement are based on implementing guides of the NSS and on the collective expertise of team members to result in increased effectiveness or efficiency. **Good practices** are best-in class policies or activities that may be of benefit to other Member States without disclosing the origin.

In summary, the recommendations and suggestions made during the Norwegian IPPAS mission related to:

- the ensuring of effective legal and financial independence of NRPA, especially in relation to the planned organizational structure of the health sector,
- the improvement of the legislative framework to clearly identify security related requirements, including the revision of the existing regulation of physical protection,
- the development of regulatory guidelines to support the licensee in complying with regulatory requirements,
- the increase of staff involved in nuclear security at NRPA,
- the clear assignment and better integration of the nuclear security responsibilities of other competent authorities,
- the conduct and scope of national level threat assessment and development of the Design Basis Threat,
- the establishment of a forum of governmental organizations having nuclear security responsibilities for enhancing their nuclear security culture,
- the improvement of the implementation of classification requirements for sensitive information,
- the trustworthiness checking of those having access to protected area,
- the better coverage of nuclear security incidents in the national and local contingency plans of the State organizations,
- the conduct of performance tests at the nuclear facilities with the involvement of the response forces,
- the improvement of the local response arrangements,
- the improvement of the physical protection systems at the nuclear facilities,
- the development of testing capabilities of physical protection systems at the nuclear facilities,
- the improvement of cyber security measures at both the NRPA and the nuclear facilities.

The following good practices were also identified:

- the structure, competences and authorities of the National Crisis Committee,
- the establishment of an independent multi-disciplinary committee overseeing nuclear security at the Institute for Nuclear Technology.

During the IPPAS mission, the team identified 66 recommendations, 73 suggestions and 2 good practices. These are detailed in the body of the report and summarized in Appendix I.

The overall conclusion of the review indicates that in general, the state of physical protection, from policy to implementation within the Norwegian nuclear industry, appears to be robust. It is clear that significant improvements have been made recently to the legal and regulatory framework and physical protection of the nuclear facilities. The IPPAS team was informed that a comprehensive review of the security regulations has started and many of the areas of concern identified by the team during the mission are already under consideration and work is in progress to address them. The security enhancements remain on-going and it is clear that there is a culture of continuous improvement at all organizational levels of nuclear security in Norway.

The sites visited have undergone recent physical protection upgrades as part of continuous improvement to their physical protection system. This will enable them to better meet current and draft requirements from the regulatory authority and ultimately help them to gain approval for their security systems through the licensing application process. Whereas the transition activities may result in a more effective security regime in Norway, the team was only able to focus on the current state of physical protection in the civil nuclear industry.

The recommendations and suggestions are intended to serve as a guide to assist Norway in continuous improvement in nuclear security, and to further align it with international instruments. The identified good practices might assist other Member States in strengthening their nuclear security regimes. This report, containing the results of the review, is for the Norwegian Government to use and share as it sees fit. Measures were taken to protect the confidentiality of the report and the underlying information.

Finally, the team would like to thank all those involved in organizing and preparing for this IPPAS mission, which was an exemplar and which reflects credit on Norway. The team considered that the openness and transparency demonstrated by all stakeholders involved in the mission contributed significantly to its success.