

## **INTEGRATED REGULATORY REVIEW SERVICE (IRRS)**

Under the terms of Article III of its Statute, the International Atomic Energy Agency (IAEA) has the mandate to establish or adopt, in consultation and, where appropriate, in collaboration with competent organizations, standards of safety for the protection of health and minimization of danger to life and property (including such standards for labour conditions), and to provide for the application of these standards to its own operations as well as to assisted operations and, at the request of the parties concerned, to operations under bilateral or multilateral arrangements or, at the request of a State, to any of that State's activities concerning peaceful nuclear and radiation activities. This includes issuing safety standards, whose effective implementation is essential for ensuring a high level of safety. As part of its providing for the application of safety standards, the IAEA provides Safety Review and Appraisal Services, at the request of Member States, which are directly based on its safety standards.

In the regulatory framework and activities of the regulatory bodies, the IAEA offered, for many years, several peer review and appraisal services. These included: (a) the International Regulatory Review Team (IRRT) programme, which provided advice and assistance to Member States to strengthen and enhance the effectiveness of their legal and governmental infrastructure for nuclear safety; (b) the Radiation Safety and Security Infrastructure Appraisal (RaSSIA) service, which assessed the effectiveness of the national regulatory infrastructure for radiation safety including the safety and security of radioactive sources; (c) the Transport Safety Appraisal Service (TransSAS), which assesses implementation of the IAEA's Regulations for the Safe Transport of Radioactive Material; (d) the Emergency Preparedness Review (EPREV), which reviews both preparedness in the case of nuclear accidents and radiological emergencies and the appropriate legislation; and (e) the International Physical Protection Advisory Service (IPPAS), which reviews the effectiveness of State systems of physical protection and provides advice and assistance to strengthen and enhance these systems.

The IAEA recognized that these services and appraisals had many areas in common, particularly concerning the requirements on a State to establish a comprehensive regulatory framework within its legal and governmental infrastructure and on a State's regulatory activities. These are requirements that also apply to countries embarking on nuclear power for the first time. Consequently, the IAEA's Department of Nuclear Safety and Security developed the Integrated Regulatory Review Service (IRRS), an integrated approach to the conduct of regulatory review missions including legal and governmental infrastructure, to improve their efficiency, effectiveness and consistency and to provide greater flexibility in defining the scope of the review.

The IRRS is intended to strengthen and enhance the effectiveness of Member States' regulatory infrastructure in nuclear, radiation, radioactive waste, transport safety and nuclear security, whilst recognizing the ultimate responsibility of each State for ensuring the safety of nuclear facilities, the protection against ionizing radiation, the safety of radioactive sources, the safe management of radioactive waste, the safe transport of radioactive material and nuclear security. The IRRS involves comparing national regulatory frameworks against regulatory safety standards and nuclear security guidance documents developed by the IAEA, as well as against international legal instruments.

The regulatory service is structured in modules that cover general requirements for the establishment of an effective regulatory framework as well as regulatory activities and management systems for the regulation and control of nuclear safety, radiation safety, waste safety, transport safety, emergency preparedness and response and nuclear security. The aim is to make the IAEA's services more consistent, to enable flexibility in defining the scope of the missions, to promote self-assessment and continuous self-improvement, and to improve the feedback on the use and application of the IAEA's safety standards. The modular structure enables tailoring the service to meet the needs and priorities of the State which has requested a mission. The IRRS is neither an inspection nor an audit, but is a mutual learning mechanism that accepts different approaches to the organization and practices of a

national regulatory body while taking into account regulatory technical and policy issues that contribute to a strong nuclear safety regime. In this context, the IRRS missions provide:

- a balance between technical and policy discussions among senior regulators;
- sharing of regulatory experiences;
- harmonization of the regulatory approaches among Member States; and
- mutual learning opportunities for regulators.

Regulatory technical and policy discussions that are conducted during IRRS missions take into account issues identified during the self-assessment made by the host organization, visits to regulated installations and activities to observe inspections and interviews with the regulatory body counterparts.

Other legally non-binding instruments can also be included upon request of the Member States, such as the Code of Conduct on the Safety and Security of Radioactive Sources, which was adopted by the IAEA Board of Governors in 2003, and the Code of Conduct on the Safety of Research Reactors, which was adopted by the IAEA Board of Governors in 2004.

The IRRS concept was developed by the IAEA's Department of Nuclear Safety and Security and then discussed at the Third Review Meeting of the Contracting Parties to the Convention on Nuclear Safety (CNS) in 2005. The IRRS was strongly supported during that year's sessions of the IAEA Board of Governors and the IAEA General Conference. The IAEA regulatory peer reviews are now recognized as a good opportunity to exchange professional experience and to share lessons learned and good practices. The self-assessment performed prior to the IAEA peer review mission is an opportunity for Member States to assess their regulatory practices against the IAEA's safety standards. All findings coming from the CNS review meetings and from the International Conferences on Effective Nuclear Regulatory Systems serve as inputs for the IRRS to consider when reviewing regulatory technical and policy issues.

In addition, the results of the IRRS missions provide effective feedback for the improvement of existing safety standards and security guidance documents and the development of new ones, and to establish a knowledge base in the context of an integrated safety approach. Through the IRRS, the IAEA assists its Member States in developing a stronger, more effective and sustainable national regulatory infrastructure.

A global nuclear safety and security framework has emerged over the last ten years, with the creation of international legal instruments such as the above-mentioned Conventions and Codes of Conduct, and significant work has been done by the IAEA towards developing a suite of harmonized and internationally accepted safety standards. The IAEA will continue to support the promotion of these Conventions and Codes of Conduct, as well as the application of its safety standards and security guidance publications in order to prevent serious accidents and continuously improve global levels of safety.