

## CONTRÔLER LES CONTRÔLEURS

# IAEA Services proposed to member states to strengthen and enhance the effectiveness of their regulatory infrastructure

Développer l'efficacité du contrôle de la sûreté, le rôle de l'IAEA

by Tomihiro Taniguchi, Deputy Director General, Department of Nuclear Safety and Security – IAEA

Under the terms of Article III of its statute, the International Atomic Energy Agency (IAEA) has the mandate to establish standards of safety for pro-

tection of health and minimization of danger to life and property in the civil development and application of nuclear energy and to provide for the application of these standards to peaceful activities. This includes the publication of a set of Safety Standards, whose effective implementation is essential for ensuring a high level of safety. The Agency also provides Safety Services, at the request of Member States, which are directly based on the IAEA Safety Standards and Security Guidance.

## Executive Summary

L'Agence Internationale de l'Énergie Atomique – AIEA – est une organisation internationale qui regroupe 137 États membres et dont le siège est situé à Vienne en Autriche. En vertu de l'article III de son Statut, l'AIEA a pour attributions d'établir des normes de sûreté pour la protection contre les rayonnements ionisants et de prendre des dispositions pour l'application de ces normes aux activités nucléaires pacifiques. A cette fin, l'Agence propose à ses États Membres différentes missions d'évaluation directement liées à ses normes de sûreté. A ce jour, cinq missions thématiques sont proposées aux États Membres dans le domaine de l'infrastructure législative et gouvernementale : les missions IRRRT (International Regulatory Review Team), les missions RaSSIA (Radiation Safety and Security Infrastructure Appraisal), les missions TranSAS (Transport Safety Appraisal Service), les missions INSServ (International Nuclear Security Advisory Service) et les missions EPREV (Emergency Preparedness Review).

Lors de la troisième réunion d'examen de la Convention sur la Sûreté Nucléaire, les parties contractantes ont souligné l'importance de ces missions de "revue par les pairs" pour améliorer la performance de leur autorité de contrôle, ainsi que leur cadre législatif et réglementaire dans le domaine du contrôle de la sûreté nucléaire. Un intérêt particulier a été porté à la revue "IRRRT", que l'Allemagne, le Canada, l'Espagne, la France et le Royaume-Uni envisagent ou ont décidé de solliciter à court terme. Ces missions IRRRT ont pour objectif de comparer le cadre légal et les pratiques de régulation dans le domaine nucléaire avec les normes de sûreté de l'AIEA. La mission, conduite par une équipe d'experts internationaux issus des Autorités de sûreté d'États Membres, s'achève par la remise d'un rapport à l'État demandeur, qui comprend des recommandations et des suggestions d'amélioration et qui relève des "bonnes pratiques" à même de devenir des références internationales.

Afin d'améliorer encore l'efficacité et la cohérence de ses revues par les pairs, l'AIEA œuvre désormais à la mise au point d'un service "intégré", qui comprendra une phase d'auto-évaluation et une mission d'évaluation de toutes les activités de contrôle dans le domaine du nucléaire: sûreté des installations nucléaires, sûreté du transport et des déchets radioactifs, radioprotection, préparation aux situations d'urgence radiologique et sécurité nucléaire. Une structure de type modulaire permettra d'adapter au mieux le service au besoin des États Membres.

Au travers de ce service intégré, l'AIEA pense pouvoir améliorer notablement l'aide qu'elle propose aux États Membres pour faire progresser le niveau de sûreté et de sécurité nucléaires sur leurs territoires respectifs.

In the thematic area of Legal and Governmental Infrastructure (LGI) the Agency offers several peer review services:

- the *International Regulatory Review Team (IRRRT)* programme provides advice and assistance to Member States to strengthen and enhance the effectiveness of the legal and governmental infrastructure for nuclear safety,
- the *Radiation Safety and Security Infrastructure Appraisal (RaSSIA)* assesses the effectiveness of the national regulatory infrastructure for radiation safety including the safety and security of radioactive sources,
- the *Transport Safety Appraisal Service (TranSAS)* has for objective to assess the implementation of the Agency's Transport Regulations,
- the *International Nuclear Security Advisory Service (INSServ)* assists Member States in the identification of the best means by which to strengthen their nuclear security,
- the *Emergency Preparedness Review (EPREV)* is conducted to review both the preparedness in the case of nuclear accidents and radiological emergencies and the appropriate legislation.

In addition, to ensure and enhance the safety of operating research reactors, the International Safety Assessment of Research Reactors (INSARR) is being offered to Member States. In this area, in the context of LGI, another instrument that needs to be

considered is the Code of Conduct on the Safety of Research Reactors, which was adopted by the IAEA Board of Governors in March 2004.

The importance of peer review and enhancing the regulatory body self-assessment capabilities to identify strengths and weaknesses as well as indicate areas for improvement of the necessary legislative and regulatory frameworks had been underlined during the 3rd Review Meeting of the contracting parties to the International Convention on Nuclear Safety (CNS) in April 2005. Member States have recognised that the IRRT methodology has proven to be an effective tool and some contracting parties, including Canada, France, Germany, Spain and the United Kingdom, indicated that they had requested or that they were considering requesting IRRT missions.

The IRRT programme, which was launched in 1989, is intended to compare, as possible, the regulatory practices in a country with international standards and equivalent good practices elsewhere. The service covers the following topics: Legislative and Governmental responsibilities, Authority, Responsibilities and Functions of the Regulatory Body, Organisation of the Regulatory Body, Authorization process, Review and Assessment, Inspection and Enforcement, Development of Regulation and Guides, Emergency preparedness, Radioactive waste management and decommissioning, Radiation protection, Transport Safety. The IRRT peer review is conducted by a team of international experts with direct experience applicable in the areas of evaluation, to provide a variety of national approaches to regulatory organisation and implementation. The results of the review are documented in a report to the Member States that includes recommendations and suggestions for improvement (recommendations are based on the IAEA Safety Requirements and suggestions are based on the IAEA Safety Guides). IRRT missions have been so far carried out in 19 countries: Armenia, Brazil, Bulgaria, China, Czech Republic, Finland, Hungary, Indonesia, Lithuania, Malaysia, Mexico, Pakistan, Romania, Slovakia, Slovenia, Switzerland, Thailand, Ukraine and Vietnam.

Peer reviews are now recognized as a good opportunity to exchange professional experience and to share lessons learned and good practices. They are neither an inspection nor an audit but are a mutual learning mechanism that accepts different approaches to the organization and practices of a na-

tional regulatory body, and that contributes to ensuring a strong nuclear safety.

In October 2004, the International Conference on Topical Issues in Nuclear Installation Safety in Beijing, China, underlined the role of the IRRT missions as a vehicle to promote regulatory consistency. In so far as many regulatory bodies have already reached a high level of performance, it also recognised the need for a revision of the IRRT process, to include a self-assessment prior to the peer review.

Moreover, considering that the five peer reviews listed above have areas in common, the IAEA Department of Safety and Security has initiated the development of an integrated approach to review missions on Legal and Governmental Infrastructure. The new service will be structured in modules, which cover general requirements, regulatory activities and management systems for Nuclear Installation Safety (Nuclear Power Plants, Fuel Cycle Facilities, Research Reactors), Radiation Safety, Waste Safety, Transport Safety, Emergency Preparedness and Response and Security (see figure 1). The objectives are to make the IAEA services related to LGI 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 IAEA Safety Standards. The modular structure also enables tailoring the service to meet the need and priority of the Member State.

The process of the integrated review service can be seen from figure 2. Based on Safety Standards and Security Guidance, the Agency will develop guidelines and a set of questionnaires for each module to help Member States perform their self-assessment. The IAEA will first offers seminars on the way to use the guidelines and the questionnaires for the self-assessment. The self-assessment is aimed to identify weak points in the regulatory framework and to formulate action plans to improve it. Thereafter, if Member States so wish, an objective and independent peer review of its results could be requested. A follow-up self-assessment and mission could then be conducted 18 to 24 months after the first peer review. The follow-up phase will review the overall efficiency of the whole continuous improvement process, including the self-assessment, the identification of strengths and weaknesses, the establishment of an action plan with the identification of the related indicators, the imple-



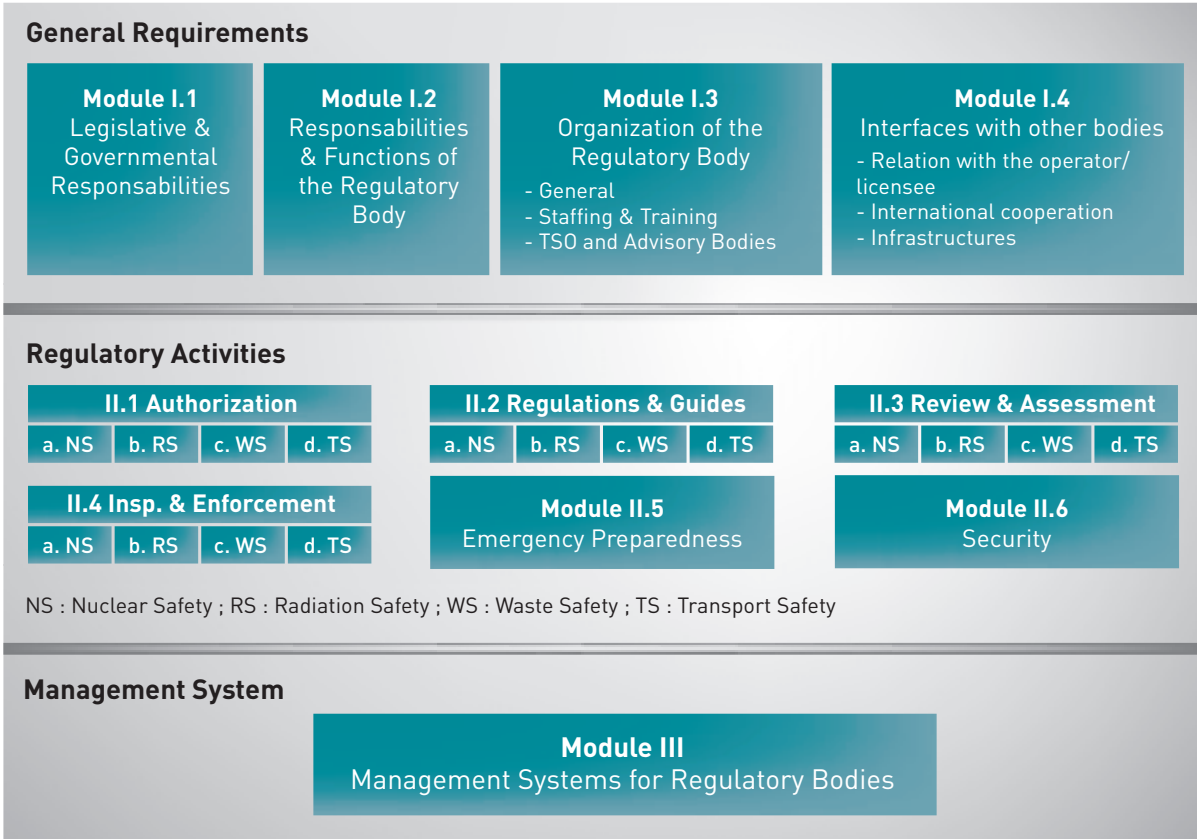


Figure 1: modular structure of the future integrated regulatory review

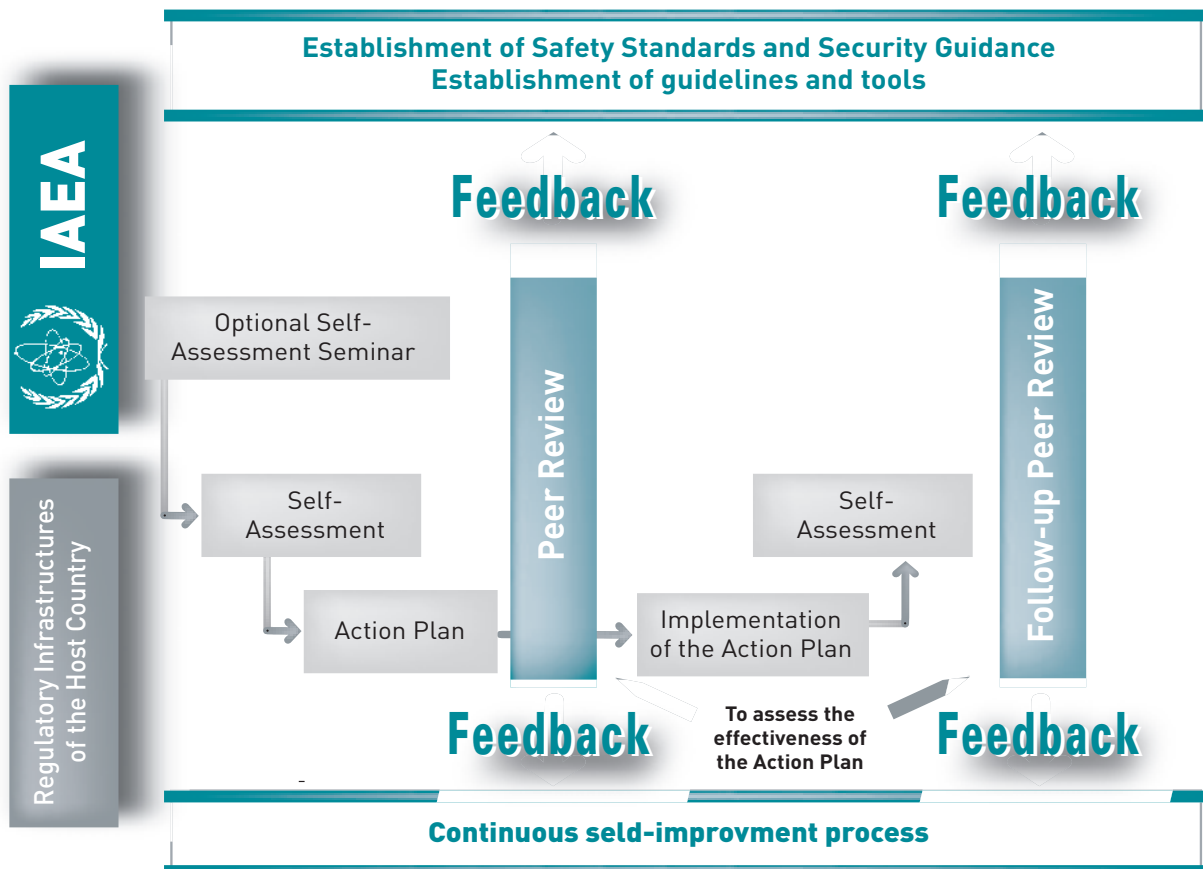


Figure 2: process of the future integrated regulatory review

mentation of this action plan and the assessment of its results.

The missions will also be used as the most effective feedback for the improvement of existing standards and guidance, the development of new ones, and to establish a knowledge base in the context of an integrated safety approach.

Global Nuclear Safety and Security Regimes have emerged over the last ten years, with international legal instruments such as Conventions and Code of Conduct and significant work towards a suite of harmonized and internationally accepted IAEA Safety Standards and Security Guidance. The IAEA will continue to support the promotion of the Conventions and Codes of Conduct, as well as the application of the IAEA Safety Standards and Security Guidance in order to prevent serious accidents and continuously improve the global levels of safety and security. Through its Integrated Regulatory Review Service (IRRS), the IAEA will assist Member States in strengthening their national safety and security infrastructure. This would contribute towards achieving a strong and sustainable global safety and security regime. ■

### **IAEA Safety Standards**

The IAEA Safety Standards are founded in the IAEA's Statute. They are issued in the IAEA's Standards Series, which have three categories:

- *Safety Fundamentals*, which present the objectives, concepts and principles of protection and safety and provide the basis for the Safety Requirements;
- *Safety Requirements*, which establish the requirements that must be met to ensure the protection of people and the environment;
- *Safety Guides*, which provide recommendation and guidance on how to comply with the Safety Requirements. They represent good practices to help users striving to achieve high levels of safety.

