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Measures to Strengthen International Cooperation in Nuclear, Radiation, Transport Safety and Waste Management

Promoting Effective and Sustainable National Regulatory Infrastructures for the Control of Radiation Sources

Report by the Director General

Summary

- This document describes the Agency's proposed policy - formulated pursuant to the request made of the Secretariat in September 2003 in operative paragraph 20 of General Conference resolution GC(47)/RES/7.A - for promoting effective and sustainable national regulatory infrastructures for the control of radiation sources. The document also outlines actions for implementing this policy. These actions supplement the Action Plan for the Safety and Security of Radioactive Sources approved by the Board in September 2003.

Recommended Action

- It is recommended that the Board approve the proposed policy for promoting effective and sustainable national regulatory infrastructures for the control of radiation sources and take note of the Secretariat's intention to implement the actions outlined in the Annex.

Background

1. In the Preamble to the International Basic Safety Standards for Protection against Ionizing Radiation and for the Safety of Radiation Sources (the BSS), it is stated that the BSS are based on the presumption that "a national infrastructure is in place enabling the Government to discharge its responsibilities for radiation protection and safety."

2. In addition to the BSS, relevant to the issue of promoting effective and sustainable national regulatory infrastructures for the control of radioactive sources are, inter alia, the Action Plan for the

Safety and Security of Radioactive Sources (the Action Plan)¹ and the Code of Conduct on the Safety and Security of Radioactive Sources (the Code of Conduct).²

3. In past years, the Agency has launched a number of initiatives for helping Member States to establish regulatory infrastructures where they do not exist or to strengthen their existing infrastructures. These initiatives include the technical cooperation Model Projects on Upgrading Radiation Protection Infrastructure (the Model Projects), in which 92 Member States are now participating, and international initiatives launched within the framework of the Agency's regular programme, as part of the Action Plan, to encourage and assist governments in their efforts to establish national radiation safety and security infrastructures. They also include extrabudgetary initiatives such as those within Activity Area IV of the Measures to Protect against Nuclear Terrorism (see documents GC(47)/17 and GOV/INF/2004/1).

4. In order to review progress in the implementation of the various Agency initiatives and to identify ways in which the current approach should be adjusted in the light of new developments, the Agency organized the *International Conference on National Infrastructures for Radiation Safety: Towards Effective and Sustainable Systems* that was held in Rabat, Morocco, in September 2003 (the Rabat Conference).³

5. In resolution GC(47)/RES/7.B, the General Conference noted the findings of the Rabat Conference and the progress of the Model Projects, welcomed the Board's approval of the Code of Conduct, and recognized the need for adjustments to the Model Projects in the light of the findings of the Rabat Conference and the guidance contained in the Code of Conduct. As a result, and pursuant to the request made in operative paragraph 20 of General Conference resolution GC(47)/RES/7.A, the Secretariat convened a technical meeting in March 2004 to develop proposals for actions to be taken in response to the findings of the Rabat Conference. On the basis of the proposals developed by the technical meeting, attended by experts from 15 Member States and from the International Labour Organization and the International Radiation Protection Association, the Secretariat proposes to take the actions that are outlined in the Annex, which include actions aimed at further enhancing effective and sustainable regulatory infrastructures.

6. The Secretariat has regularly kept the Board informed of progress in the implementation of the Model Projects (GOV/1999/67, GOV/2001/48 and GOV/INF/2003/19), and, as indicated in paragraph 33 of document GOV/INF/2003/19, it intends to report on the achievements of the Model Projects to the Technical Assistance and Cooperation Committee and the Board of Governors in November 2004 and to submit detailed proposals for their future implementation.

7. Finally, as part of the Secretariat's response to the need for adjustments to the Model Projects, in December 2003 the Director General commissioned a *Programme Evaluation of the Model Projects for Upgrading Radiation Protection Infrastructure*. This evaluation, which was carried out by the Office of Internal Oversight Services (OIOS) with the help of an external evaluation team, was completed in July 2004.

¹ The Action Plan for the Safety and Security of Radioactive Sources approved by the Board in September 2003 was contained in Annex 1 to document GOV/2003/47-GC(47)/7.

² The Code of Conduct was approved by the Board and the Board's approval welcomed by the General Conference in September 2003. The IAEA published the Code of Conduct in January 2004, under the symbol IAEA/CODEOC/2004.

³ The Rabat Conference was organized in cooperation with the European Commission, the Nuclear Energy Agency of the Organisation for Economic Cooperation and Development, the International Labour Organization, the World Health Organization, and the Pan American Health Organization and attended by 346 participants and 37 observers from 108 countries, including 11 countries that are not Member States of the Agency.

The Vision

8. The OIOS's Programme Evaluation Report stated inter alia that "clear, measurable, sustainable success is evident in the Model Projects and much is attributable to the proactive nature of the projects and the national commitments of the participating Member States". A substantial benefit resulting from the Model Projects has been the development of regional expertise, networking, and postgraduate educational and training courses in radiation safety. The evaluation found that the interest in and the awareness of the Model Projects have led to the unprecedentedly active engagement of governments, at the ministerial and regulatory levels, and of end-users in efforts to comply with the principal requirements of the BSS. The Model Projects have substantially improved the understanding and implementation of the BSS and therefore the radiation protection infrastructures in developing Member States. As recommended in the Programme Evaluation Report, the Secretariat will continue to build on the success of the Model Projects approach in order to ensure the sustainability of radiation protection infrastructures in Member States and will expand the approach in response to new requirements stemming from the Code of Conduct and recent developments. To this end, the Secretariat has defined a vision to guide the design, planning, prioritization and delivery of future projects and actions to realize this vision.

9. The vision is to achieve effective and sustainable national regulatory infrastructures for the control of radioactive sources in all Agency Member States. This will require a strategy for the systematic strengthening and acceleration of ongoing work. While the Agency's assistance is critical for the development of such infrastructures, it is Member States themselves which have the ultimate responsibility for ensuring that adequate regulatory oversight is in place to protect public health against the effects attributable to radiation exposure and to provide adequate safety and security for radioactive sources and that they have regulatory requirements compatible with the BSS, the Code of Conduct and related documents.

Implementation

10. The Secretariat, through the Agency's regular and technical cooperation programmes, will continue its proactive approach to assisting Member States. It will do so by providing all relevant stakeholders with clear and accurate information about the Agency's programmes and activities, by bringing about a common understanding of the baselines or starting-points and by ensuring frequent communication of the measured progress towards the achievement of project objectives. It is expected that this proactive approach will lead to more consistent, reliable, predictable and timely decision-making and will minimize the duplication of efforts within the Secretariat and in Member States.

11. As proposed in the OIOS's Programme Evaluation Report, the Secretariat will continue supporting regulatory infrastructure projects. The Secretariat agrees that there should be a clearly defined exit strategy or end-point for the projects. The Secretariat will encourage Member States, also through implementation of the actions outlined in the Annex, to play a more active role in the implementation of strategies that will help to enhance the control of radiation sources. For the next technical cooperation cycle, it is proposed that for each region there be a number of national and regional projects, based on requests from and on the needs identified in Member States, to promote effective and sustained national regulatory infrastructures for the control of radiation sources. These projects will focus on: encouraging Member States to engage in periodic appraisals and self-assessments (using, for example, the Agency's "Radiation Safety Infrastructure Appraisal" methodology); strengthening the education and training of regulatory staff; and encouraging stakeholder involvement, networking and information exchange. By expanding regional cooperation, self-reliance and networking, and further promoting the "train-the-trainer" approach, the success and sustainability of infrastructures for the control of radiation sources should be greatly enhanced. Compliance with relevant national laws and regulations based on the BSS and the Code of Conduct

will help to ensure this sustainability. In line with the recommendations in the OIOS's Programme Evaluation Report, the Secretariat will seek to ensure effective oversight and coordination across all relevant organizational units as regards the implementation of radiation safety and security infrastructure projects for the control of radiation sources.

12. In the case of non-Member States, based on previous decisions of the Board and subject to the availability of extrabudgetary funds and to the conditions regarding Agency assistance to non-Member States set out in GOV/1999/14, assistance will be provided through extension of the administrative and programme management arrangements already in place and through the new arrangements to be created in the light of the recommendations contained in the OIOS's Programme Evaluation Report, in order to ensure coherence and consistency of approach for all States.

Promoting Effective and Sustainable National Regulatory Infrastructures for the Control of Radiation Sources

A. Objective and Scope

The objective of the actions outlined below is to promote effective and sustainable national regulatory infrastructures for the control of radiation sources. The scope is determined by the requirements of the BSS and the guidance in the Code of Conduct, and should be viewed as a supplement to the Action Plan for the Safety and Security of Radioactive Sources approved by the Board in September 2003. The actions will be taken if adequate funding is available and if they are requested by the States concerned.

B. Actions

B.1. Regulatory Infrastructure Development

Action 1: The IAEA will incorporate additional regulatory requirements and guidance contained in the Code of Conduct and in the Categorization of Radioactive Sources (IAEA-TECDOC-1344) into its future assistance projects. It is proposed that the additional requirements and guidance include:

1. The establishment of national registries/inventories, including the prompt development of a standard registry/inventory format and of tagging and tracking systems, in cooperation with manufacturers;
2. The life-cycle management and appropriate disposal of radioactive sources (“cradle-to-grave” oversight by regulatory authorities);
3. The development of national strategies for locating, identifying and regaining regulatory control over orphan sources;
4. Strengthened control over the import and export of radioactive sources;
5. Measures to avoid or minimize the likelihood of malicious acts;
6. Emergency actions for responding to malicious acts involving radioactive sources¹; and
7. Actions to be taken in proven cases of illicit trafficking in and malicious acts involving radioactive sources (including theft).

Outcome: Comprehensive and effective regulatory control of radioactive sources through strengthened and focused IAEA assistance projects.

Timing: The action will commence as soon as feasible, taking into account the capacity of States to take the necessary measures.

¹ See, in this connection, the International Action Plan for Strengthening the International Preparedness and Response System for Nuclear and Radiological Emergencies (contained in Annex 1 to document GOV/2004/40 (Corrected)).

Action 2: The IAEA will substantially strengthen and accelerate its activities for promoting regulatory infrastructures in Member States and non-Member States. The objective of these activities will be to establish, in the medium term, in all countries receiving IAEA assistance a regulatory framework² augmented by the elements mentioned under Action 1 above.

Outcome: Improved understanding of the BSS and the Code of Conduct in order to take effective measures to achieve compliance with their requirements and progress towards the establishment by all countries receiving IAEA assistance of an effective regulatory framework capable of responding to the requirements listed in Action 1 above.

Timing: The action will commence as soon as feasible.

Action 3: The IAEA, while taking due account of confidentiality issues, will develop and implement a mechanism for making optimum use of the information in its Country Radiation and Waste Safety Profiles (CRWSPs)³, which indicate — inter alia — the status of national regulatory control of radioactive sources.

Outcome: An improved mechanism for facilitating the implementation of actions arising out of the Code of Conduct, including actions relating to the export and import of sources and the exchange of information and know-how.

Timing: Some elements of this action have already been initiated, and a new mechanism should be in place by the time that export and import requirements are implemented.

Action 4: The IAEA will foster bilateral, regional and interregional regulatory partnerships for enhancing national regulatory control infrastructures. This action should include encouraging States to enhance exchanges of experience in the establishment of infrastructures for the regulatory control of radioactive sources between relevant governmental agencies and the provision of guidance on interdepartmental coordination, on the conduct of joint exercises for the interdiction of illicit trafficking, on joint planning for radiological emergencies, etc.

Outcome: Enhanced bilateral, regional and interregional regulatory partnerships to help ensure the safety and security of high-risk radioactive sources. (See TECDOC/1344).

Timing: The action will commence as soon as feasible.

² “The establishment of a regulatory framework” involves the drafting and promulgation of radiation protection laws and regulations, the designation and empowerment of a national regulatory authority and the establishment of a system for the notification, authorization, inspection and enforcement related to radiation sources (including the preparation of an inventory of radiation sources and installations).

³ The CRWSPs cover all legal, regulatory and other matters relevant to the safety of radioactive sources.

Action 5: The IAEA, working through regional partnerships with Member States, will make available an upgraded version of the Regulatory Authority Information System (RAIS). The IAEA will ensure that the upgraded RAIS is operational in all official languages of the IAEA and that a programme is established for ensuring that the software is maintained and regularly upgraded by regional centres and that sufficient training is provided to the users. The IAEA will, if necessary, encourage Member States to translate RAIS into their respective national languages in order that it may be used as an official tool for controlling radiation sources.

Outcome: More efficient and effective use, maintenance and updating of RAIS.

Timing: The upgrading of RAIS has already started.

B.2. Networking

Networking is becoming recognized by Member States as a very effective instrument for enhancing the sharing of knowledge and experience essential to the prevention of accidents and to the implementation of radiation safety and security measures. Networking is also becoming recognized as an important tool for facilitating the transition from dependence to self-sufficiency and sustainability. The IAEA intends to support the development of focused networks as an effective means of improving cooperation, fostering an integrated safety approach and promoting continuous improvement.

Action 6: The IAEA will support the development of networks aimed at promoting effective and sustainable national regulatory infrastructures, including networks based on regional structures and devoted to specific radiation safety and security topics. The IAEA will assess and provide advice on the hardware and software required by Member States in order to operate the networks.

Outcome: Increased number of networks enabling the IAEA and countries to reach target audiences in order to achieve better implementation of standards.

Timing: Work on the development of networks has already started.

B.3. Education and Training

In line with the IAEA's "Strategic Approach to Education and Training in Radiation and Waste Safety", the implementation of which was noted with appreciation by the General Conference in 2002 in resolution GC(46)/RES/9.C, the IAEA will implement the following actions:

Action 7: The IAEA, with guidance from its Education and Training Steering Committee, will strengthen its strategic approach to education and training in radiation and waste safety by (a) further promoting the "train the trainers" approach as a means of achieving national and regional sustainability in the field of education and training; and (b) continuing to help Member States to organize Postgraduate Educational Courses in Radiation Protection and the Safety of Radiation Sources (PGECs) leading to a diploma in radiation safety using the existing and future TC programmes.

Outcome: An increased number of qualified experts in different countries who can train radiation protection officers.

Timing: Work on strengthening the IAEA's strategic approach to education and training in radiation and waste safety has already started.

Action 8: The IAEA will produce a document with guidelines for conducting appraisals of the status of education and training in radiation safety and security in Member States, in order to help ensure high quality and compliance with IAEA standards, and prepare, in all its official languages, training packages for radiation protection officers, especially those working in medicine and industry (it will encourage Member States, where necessary, to translate these packages into their local languages).

Outcome: Increased effectiveness of education and training as a means of promoting compliance with IAEA standards and greater use of training packages at the national level.

Timing: Work has already started on the formulation of guidelines and on the preparation of training packages for radiation protection officers.

Action 9: The IAEA will launch a training programme designed to produce regulatory inspectors at the national level qualified to carry out inspections of national regulatory authorities in the area of radioactive source safety and security.

Outcome: Increased number of competent national regulatory inspectors in Member States.

Timing: The action will commence as soon as feasible.

B.4. Outreach

Action 10: The IAEA will develop “tool-kits” for informing news media staff, the general public and particularly concerned stakeholders about radiological hazards, radiation protection, radioactive waste safety, the security of radioactive materials and radiological emergency response and make them available to Member States, and it will seek to harmonize the terminology used by various international organizations relating to the regulatory control of radioactive sources by making available the draft IAEA Safety Glossary (Terminology used in Nuclear, Radiation, Radioactive Waste and Transport Safety) in all official IAEA languages.

Outcome: Increased general awareness and harmonized terminology.

Timing: The action will commence as soon as feasible.