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MEASURES TO STRENGTHEN INTERNATIONAL CO-OPERATION IN NUCLEAR, RADIATION, TRANSPORT AND WASTE SAFETY

EDUCATION AND TRAINING

**(Secretariat action since the forty-fourth (2000) regular session
of the General Conference)**

BACKGROUND

1. Last year, in resolution GC(44)/RES/13, the General Conference requested the Director General to report to it on progress made on matters relating to education and training aimed at strengthening international co-operation in nuclear, radiation, transport and waste safety.

ACTION TAKEN SINCE THE GENERAL CONFERENCE'S 2000 SESSION

2. On 8 November 2000, in Note Verbale 720-JI.06 Circ., the Secretariat informed Member States that it was: preparing standardized training material in all official languages; establishing a network of regional training centres and collaborating institutions which would assist the Secretariat in organizing post-graduate educational courses and specialized training events; and assisting national and regional training centres in conducting educational and training courses in the official languages. Also in that Note Verbale, the Secretariat requested Member States to inform it of any national training centres and other national institutions (and of any national professional bodies) which might be able to support its efforts.

Advisory Group on education and training in nuclear safety

3. In March 2001, the Secretariat convened an Advisory Group on education and training in nuclear safety. The Advisory Group considered the question of the structure, scope and means of implementation of an IAEA Programme of Education and Training in Nuclear Safety.

4. The Advisory Group recognized that there is a need for long term, sustainable programmes of education and training in nuclear safety in Member States and that a gap

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exists between the nuclear safety knowledge required in Member States and the ability of the Agency to provide training. It concluded that, as a complement to training courses, the Agency should concentrate on helping Member States to establish sustainable national education and training programmes that are consistent with international safety standards, an essential element of this effort being the development by the Agency of model training programmes which could be used in training the trainers who would ultimately implement the national programmes.

5. The Advisory Group recommended a strategy for helping Member States to ensure sustainable education and training. A central objective of the strategy would be to ensure the sustainability of education and training in nuclear safety at the national level, which would require the firm commitment of governments to providing the resources necessary for the establishment and maintenance of training programmes. The Advisory Group called for a twin-track approach comprising: (a) the provision by the Agency of exemplary training that conveys basic and specialized knowledge, aimed at trainers and other professionals; and (b) the commitment of Member States to establishing their own sustainable training programmes modelled on the exemplary training provided by the Agency.

6. The Secretariat intends to implement the recommended strategy. Implementation of the strategy will involve the preparation of textbooks and other standard course materials, the establishment of regional and national training centres and the training of trainers both in the subject matter and in the training methods to be applied in the courses. The Advisory Group advocated the use of distance learning as a complement to — or prerequisite for — more traditional training and recommended that the Secretariat continue with its efforts in the field of distance learning and evaluate their usefulness to Member States.

7. The Advisory Group encouraged the Secretariat to provide, on request, advice to Member States wishing to evaluate their national training needs and to organize and assist with the required training. Also, it suggested that the Secretariat consider establishing an advisory service as a means of providing advice in a comprehensive and consistent manner.¹

Advisory Group on education and training in radiation and waste safety

8. In April 2001, the Secretariat convened an Advisory Group on education and training in radiation and waste safety. The Advisory Group considered ways of developing and maintaining long term education and training programmes, harmonizing the preparation of specialized training course material and establishing and strengthening regional and national training centres. Also, it finalized the revised *Standard Syllabus* for post-graduate educational courses in radiation protection and the safe use of radiation sources.

9. The Advisory Group agreed on a strategy for education and training in radiation and waste safety whose objective — the development and maintenance of competence in radiation and waste safety in Member States — would be achieved through: (a) sustainable education and training programmes in Member States; and (b) an Agency support programme for promoting information exchange and strengthening the role of regional training centres. The

¹ The report of the Advisory Group on education and training in nuclear safety was transmitted to Member States under cover of Note by the Secretariat 2001/Note 19 dated 14 August 2001.

Secretariat intends to implement the strategy through the *long term* Action Plan summarized in tabular form in the Advisory Group's report.² The Advisory Group recommended the establishment of a Steering Committee to advise on the implementation of the strategy. Other functions of the Steering Committee would include advising on the development of standardized training material, reviewing training material for consistency, and assessing the effectiveness of education and training programmes.

10. The Advisory Group also recommended the use of modular training material, which allows flexibility in the choice of material, and the adoption of a systematic approach to the establishment of regional and national training centres and to the development of the network of such centres.

11. The Advisory Group, which was informed about the good progress being made in the ongoing IAEA/RCA distance learning project in the field of radiation protection, recommended that the Secretariat make greater use of distance learning and consider making its computer based material for distance learning available on the Internet.

Training courses and materials

12. Since the 2000 session of the General Conference, the Secretariat has continued to organize training courses and workshops in nuclear safety. A Basic Professional Training Course in Nuclear Safety was held for Latin American countries in November 2000 in Brazil; for South-East Asia, Pacific and Far East countries in February 2001 in the United States of America; and for European countries in March 2001 in France. It was held in Romania as a national training course in November 2000. A training course on Regulatory Control of Nuclear Power Plants was held in Karlsruhe, Germany, in May 2001 for European countries. The results of course evaluations conducted immediately at the end of the courses and then several months later were very positive.

13. The Secretariat has also continued to organize regional post-graduate educational courses in radiation and waste safety — in Argentina (in Spanish), in South Africa (in English), in Malaysia (in English) and in the Syrian Arab Republic (in Arabic). In addition, 22 national and regional specialized courses in radiation safety have been conducted.

14. Further details on training courses and workshops, including training in legislative and regulatory assistance matters, can be found in GC(45)/INF/3 "Measures to Strengthen International Co-operation in Nuclear, Radiation, Transport and Waste Safety".

15. The Secretariat has developed a considerable amount of distance learning material, including a video film on legal and governmental infrastructures for nuclear safety and tutorials in reactor physics and thermal hydraulics.

Follow-up Action

² The report of the Advisory Group on education and training in radiation and waste safety was transmitted to Member States under cover of Note by the Secretariat 2001/Note 20 dated 14 August 2001.

16. The Secretariat endorses the recommendations of both Advisory Groups and will implement them in the respective programmes.