

To: The Secretary, Joint Standing Committee on Treaties.

Subject: Proposed acceptance of the Regional Co-operative Agreement for Research, Development and Training Related to Nuclear Science and Technology (RCA)

Distance Assisted Training for Nuclear Medicine Professionals

IAEA / RCA Projects RAS/6022, RAS/6029, RAS/6064

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Many countries have made significant investments in nuclear medicine technology with the acquisition of modern equipment and establishment of facilities, however, often appropriate training was not considered as part of these investments. Training of Nuclear Medicine (NM) professionals is continually evolving, with need to meet changing requirements in the work force.

Developing appropriate training programs for the broader international nuclear medicine community is one of the goals of the IAEA. A particularly successful and relevant development has been the program on 'Distance Assisted Training (DAT) for Nuclear Medicine Professionals'. The development of DAT was initiated in the '90s through Australian Government funding and administered by Australian developers under auspices of the IAEA through its Regional Cooperative Agreement (RCA), involving most countries in Asia that are Member States of the IAEA.

The project has resulted in the development of a set of training modules which are designed for use under direct supervision in the work-place. The delivery mechanism of DAT has progressed from traditional paper-based publishing and postal delivery, to provision in electronic form on CD-ROM and more recently through internet access. DAT on-line (DATOL) www.datnmt.org has provided the opportunity to include so much more with image manipulation, interactive teaching tools, visual demonstrations, improved communication, student support capabilities and enhanced programme management, which serve to strengthen understanding of the field. The program has undergone several revisions and peer reviews with the current version providing a comprehensive syllabus which supports 39 subjects delivered in a logical sequence of modules involving ~900 hours of study. As most students work full time, 5 - 6 hours of study per week is required in order for students to achieve completion over a 2 - 3 year period. Although the material contains practical information, which may be useful as stand-alone material and of interest to any of the professional groups working in nuclear medicine, the intention is for the training material to be used specifically for Nuclear Medicine Technologists as part of a national training program. Trainees that complete the training program should be competent as practising technologists and able to contribute to the improvement of efficiency and quality of clinical nuclear medicine services, ultimately benefiting the patient.

Assessment plays a major role in certifying the competence of the nuclear medicine professional. The need to standardise assessment procedures in the region was considered important. Each of the subjects includes a set of exercises, the results of which are recorded to verify course completion, on-line assignments and final examination questions as well as assessment of clinical practical skills. Following an early evaluation of program implementation it became evident that a formalized management infrastructure was needed in each participating country or region, directed by a relevant authority such as the National Society of Nuclear Medicine or relevant government departments (e.g. Ministry of Health, Ministry of Education). Each relevant National Authority is responsible for endorsing and issuing the Final Certificate of Achievement.

DAT has been utilised widely in the Asia-Pacific, Latin America, following translation to Spanish, and in parts of Africa and Europe. The programme continues to evolve and has been available on-line since 2009. In total more than 800 off-line and on-line students have been fully assessed since the program commencement.

An important milestone achieved is that the Online Training Material DATOL is now available through the IAEA CPL4NET platform, which provides Open Access without assignment and Instructor-led Access with assignment and assessment. It is suitable for personal study, continuous professional development, formal vocational training and for adoption by universities and colleges for nuclear medicine professionals, and is now fully updated and available through the IAEA Human Health Campus (HHC).

Summary:

Through the RCA Projects, the IAEA has been assisting Member States to develop the competencies and capabilities of individuals, groups, or countries in the safe and efficient practice of nuclear medicine through harmonised web-based distance learning programmes.

A valuable benefit is the RCA project support for Train the Trainer Workshops enabling Australian course developers and technical experts to visit participating countries to discuss progress, resolve problems, provide lectures, as well as instruction and demonstrations on practical applications to include QA, QC and students' assessment. The programme and face to face visits have strengthened the links between the Australian nuclear medicine education sector and National Societies of Nuclear Medicine and government organizations in RCA involved in the delivery of DATOL.

E-education through the RCA is having a profound effect on the quality and extent of training of professionals and practitioners in nuclear medicine, not only in the Asia-Pacific region, but well beyond.
