## Introduction

### IAEA long term strategy

The IAEA has a statutory function to establish standards for the protection of health, life and property against ionizing radiation and to provide for the application of these standards to peaceful nuclear activities. Education and training (E&T) is one of the main mechanisms to provide support to Member States in the application of the standards. In 2000, an internal evaluation of the overall education and training programme was undertaken. The conclusions were that the provision of and support for E&T in Member States tended to be on a reactive rather than proactive basis, contributing to a culture of dependency rather than sustainability. On the basis of this evaluation, a strategic approach\(^1\) to education and training in radiation and waste safety was developed that outlined the objectives and outcomes to be achieved over a ten year period (2001–2010). General Conference Resolutions\(^2\) have underlined or emphasized the importance of sustainable programmes for education and training in radiation, transport and waste safety, and have also welcomed the ongoing commitment of the Secretariat and Member States to the implementation of the strategy.

A Steering Committee for Education and Training in Radiation Protection and Waste Safety was established in 2002, with the mission of advising the IAEA on the implementation of the strategy and making recommendations as appropriate. In 2010, the Steering Committee analysed the overall achievement of the strategic approach 2011–2020, refined the vision of the original strategy and redefined the related objectives. The Strategic Approach to Education and Training in Radiation, Transport and Waste Safety (2011–2020)\(^3\) was submitted to the IAEA’s policy-making organs and was noted by its Board of Governors in September 2010.

---

1. GC(45)/RES/10 urged the Secretariat to implement the strategy provided in the Note ‘2001/Note 20’.
2. GC(46)/RES/9, GC(47)/RES/7, GC(48)/RES/10, GC(49)/RES/9, GC(50)/RES/10, GC(51)/RES/11, GC(52)/RES/9 and GC(53)/RES/10.
3. Note to the Board ‘2010/Note 44’.
Strategic Approach 2011–2020

The implementation of the 2001–2010 strategy was considered to be a success in as much as the objectives were achieved at the regional level. While there has been significant progress with respect to the development of specific activities, the process needs to be continued to facilitate further development of the education and training infrastructure at the national level. The strategy for 2011–2020 recognizes the importance of Member States taking ownership of the tasks through developing and implementing national strategies to strengthen education and training in radiation, transport and waste safety to achieve the desired level of competence.

Vision

The ultimate vision is for Member States to have established a sustainable education and training infrastructure that addresses national needs for building and maintaining competence in radiation, transport and waste safety and is consistent with the IAEA Safety Standards.

Activities and key players

The strategy for 2011–2020 is focused on two main activities:

- Development and implementation of national strategies;
- Effective use of education and training tools.

To ensure a comprehensive approach to building competence in radiation protection in a sustainable way, Member States are invited to consider developing a national strategy for education and training. Such strategy can be considered to consist of 4 interlinked steps, where the outcome of one step is the starting point for the next, with the loop being closed by evaluation and feedback (Fig 1).

Fig. 1: Phases to establish and maintain a national strategy for education and training in radiation protection

The IAEA has developed a comprehensive portfolio of training packages for train the trainer (TTT) events, post graduate educational course on radiation protection and the safety of radiation sources (PGEC), specialized training courses (STC), courses for radiation protection officers (RPO) and distance learning was developed. These packages are available to Member States in most of the official languages of the IAEA.

The successful implementation of the proposed strategy will require effective interaction between the Secretariat, the regional training centres and Member States. In particular, increased ownership on the part of Member States would be expected over the course of the strategy since this is where the primary responsibility for building competence lies.

The relevance of the role played by the main key players will depend on the phases in the implementation of the strategy as shown in Fig. 2.

<table>
<thead>
<tr>
<th>Phase I Preparation</th>
<th>Phase II Promotion</th>
<th>Phase II Implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Complete the development of tools and guidance for building competence in radiation, transport and waste safety</td>
<td>Dissemination of tools and guidance at regional level and among Member States</td>
<td>Development and implementation of national strategies in Member States</td>
</tr>
<tr>
<td>Major Role</td>
<td>Secretariat</td>
<td>RTCs</td>
</tr>
</tbody>
</table>


Regional Training Centres

The regional training centres (RTCs), including the regional designated centres under the AFRA agreement, offer training in Arabic, English, French, Russian, Portuguese and Spanish, and they represent regional resources with respect to the implementation of the strategy. In particular, these centres:

- Provide comprehensive, well-equipped training facilities (including laboratories);
- Provide staffing by competent and suitable personnel;
- Actively promote and use IAEA Safety Standards and the reference training material available for the IAEA;
- Deliver education and training activities in radiation protection and waste safety (including specifically PFECs, TTT events, OJT, fellowships, etc.) in a sustainable way.

In the framework of the Strategic Approach 2011–2020, the RTCs are expected to play an essential role, particularly in Phase II of the implementation of the strategy when they are expected to assist individual Member States, in collaboration with the IAEA in establishing and implementing national strategies for building competence through education and training.

Regional centres are established in all the IAEA Technical Cooperation regions:

Africa: (AFRA Regional Designated Centres)
- CNESTEN, Morocco (French)
- CRNA, Algeria (French)
- SNAS, Ghana (English)

Asia and the Pacific
- AECS, Syrian Arab Republic (Arabic)
- NMA, Malaysia (English)

Europe
- GAEC, Greece (English)
- ISEU, Belarus (Russian)

Latin America
- ARN, Argentina (Spanish)
- IRD/CNEN, Brazil (Portuguese)

Member States hosting RTCs:

- CNESTEN–Centre National de l’Energie des Sciences et des Techniques Nucléaires
- CRNA–Centre de Recherche Nucléaire d’Alger
- SNAS–School of Nuclear and Allied Sciences
- AECS–Atomic Energy Commission of Syria
- NMA–Nuclear Malaysia Agency
- GAEC–Greek Atomic Energy Commission
- ISEU–International Sakharov Environmental University
- ARN–Autoridad Regulatoria Nuclear
- IRD/CNEN–Instituto de Radioproteção e Dosimetria/Comissão Nacional de Energia Nuclear do Brasil
Steering Committee

To successfully implement the strategy, an adaptable and flexible response is required as training needs develop and change. Consequently, there is a need for ongoing observation and review to ensure that implementation of the strategy continues to be on course to meet the objectives. The Steering Committee for Education and Training in Radiation Protection and Waste Safety is aimed at advising the IAEA on the implementation of the strategic approach. Its terms of reference include:

- Reviewing progress of, and providing advice with respect to the implementation of the strategy;
- Identifying appropriate performance indicators;
- Advising on the priorities for the development of standardized training material and training activities;
- Providing advice with respect to how Member States may monitor effectiveness of their own E&T programmes.

It comprises representatives from regional and collaborating centres, international organizations and IAEA staff with responsibilities for education and training in radiation, transport and waste safety. The Steering Committee meets annually. During the meeting it discusses and evaluates the status report provided by the Secretariat and the results of the performance indicators; determines recommendations and future actions; and prepares a report of the meeting to be submitted to the IAEA.

10th Meeting of the Steering Committee (Vienna, 21–25 November 2011)
Members include (from L-R, ):  M. Lebai Juri (Malaysia);  M. Ali Jibre (Morocco);  Y. Nam (Republic of Korea);  J. Wheatley (IAEA);  M. Kharita (Syrian Arab Republic);  A. Al Khatibeh (IAEA);  P. Dimitriou (Greece);  S. Fernandez Moreno (Argentina);  Q. Zhou (China);  J. Stewart (UK);  A. Schmitt-Hannig (Germany);  C. Schandorf (Ghana);  T. Juhel (France);  M. Marco Arboli (Spain);  S. Chelhiani (Algeria);  M. Prendes Alonso (Cuba);  A. Luciani (IAEA);  A. Noureddine (Algeria);  M. Miller (USA);  A. Timoshchenko (Belarus);  M. Coeck (Belgium);  C. Bonacossa de Almeida (Brazil)