



**IAEA**

International Atomic Energy Agency

*Atoms for Peace*

**DIVISION OF RADIATION, TRANSPORT AND WASTE SAFETY**



**EDUCATION AND TRAINING APPRAISAL  
IN RADIATION PROTECTION AND THE SAFETY OF  
RADIATION SOURCES**

**LEBANON**

**13 - 17 January 2014**

## COMPOSITION OF THE IAEA APPRAISAL TEAM

1. Andrea Luciani, Team Coordinator, IAEA
2. Panagiotis Dimitriou, Team Leader, Greek Atomic Energy Commission, Greece
3. Zulkifli M. Hashim, Nuclear Malaysia, Malaysia

## PERSONS MET DURING THE MISSION

Name	Designation
<b>Lebanese Atomic Energy Commission</b>	
Ms. Rola Bou Khozam	Quality Manager – Office report to the Director
Mr. Hassan Bsar	Section Head, Authorization, Inspection and Regulations Department
Mrs Leila el Nashef	Authorization, Inspection and Regulations Department
Dr. Omar El Samad	Department Head, Environmental Radiation Control – PGEC programme
Dr. Hanna El Bala'a	Department Head , Radiation Safety Services – PGEC programme
Dr. Salam Nouredine	Beirut Arab University – PGEC programme
<b>American University of Beirut – Medical Center</b>	
Dr. Moukbel Hourani	Department of Diagnostic Radiology
Mrs. Marlene Kushkejerian	Radiologic Technology and Radiation Safety Program
<b>Mount Of Lebanon Hospital</b>	
Dr. Mohamad Haidar	Head of Nuclear Medicine section
Dr. Marwan Haddad	Head Radiology Department
<b>Middle East Institute for Health</b>	
Dr. Salim Chamas	Head of Radiotherapy section
Dr. Hanna El Bala'a	Physicist
<b>Institut Saint Famille - Undergraduate Program for Radiographer Technician</b>	
Soeur Noha Bou Tanos	Director of the institute
Ms. Mirna Soueidy	Trainer
<b>Lebanese German University: Bachelor Degree of Radiographer Technologist</b>	
Dr. Zeina Mehyou	Head of Academic program
Dr. Roy Daou Abou Zeid	Head of Biomedical Technologies and Medical Imaging Departments
<b>Lebanese University – Public Health faculty: Bachelor Degree of Radiographer Technologist</b>	
Mrs. Samia Ouwaïdat	Technical and Administrative Assistant of the Diploma programme

<b>Ciment Sibline – Industrial facility for cement production</b>	
Mr. Fouad Jaafar	Quality and Compliance Manager
Mr. Amer Hemadeh	Head of Quality & Safety compliance
Mr. Mohamad Abdallah	Safety Officer

## **BACKGROUND AND SUMMARY**

On request of the Lebanese Atomic Energy Commission (LAEC) an Education and Training Appraisal (EduTA) was agreed to be conducted on 1317 January 2014 under the Technical Cooperation national project LEB9006.

The questionnaire was sent out to LAEC with the request to fill out the core modules (Modules A on the legal and regulatory framework for education and training, and Module B on the national strategy for education and training). Counterpart was also invited to fill out Module C, conceived to be filled out by organizations conducting the Postgraduate Educational Course in radiation protection and the safety of radiation sources (PGEC) under the auspices of the IAEA, in order to have a feedback on the PGEC organized at national level by LAEC with other local institutions. For that reason, this module was not considered as part of the appraisal mission.

A partially filled questionnaire with the supporting documents was sent back to the IAEA contact point before the conduction of the mission for a preliminary assessment. After consultation with the other members of the EduTA appraisal team, the IAEA contact point provided the Lebanese counterpart with guidance and suggestions on how to amend the provided information in order to properly address some of the questions, particularly in relation to the legal and regulatory framework for education and training. A final version of the questionnaire was sent back by the Lebanese counterpart two weeks before the conduction of the mission.

## **OBJETIVES AND TERMS OF REFERENCE OF THE EduTA MISSION**

The general objectives of the EduTA are:

- To carry out a detailed appraisal of the status of the provisions for education and training in radiation protection and the safety of radiation sources;
- To identify areas in education and training, where the provisions should be improved to meet (i) the IAEA safety standards, (ii) the national education and training needs, (iii) best practices;
- To provide the host Member State with recommendations and suggestions for improvement;
- To provide key staff in the host Member State with an opportunity to discuss the legislative framework and the national policy and strategy in the field, with the EduTA team members who have experience in the issues at stake;
- To promote the IAEA Standard and Guidelines relevant to the scope of the appraisal.

In this framework, the terms of reference of this appraisal mission were:

- To revise and review, together with the counterpart, the information provided in Module A and B of the EduTA questionnaire on the legal and regulatory framework for education and training in radiation protection and safety, and the national strategy for education and training, respectively.
- To provide the counterpart with a feedback on the conduction of the Postgraduate Educational Course in Radiation Protection and the Safety of Radiation Sources (PGEC), organized at national level (for that purpose the Module C of the EduTA questionnaire has been used, even

if this module is normally aimed at appraising a PGEC conducted under the auspices of IAEA);

- Providing an opportunity to continuously improve the overall education and training in radiation protection and safety infrastructure, including update of national legislation and regulations to reflect the relevant requirements in IAEA GSR Part 3.

## **CONDUCT OF THE MISSION**

The EduTA mission was conducted according to the agreed Mission Programme. During the first day of the mission which was a National Holiday in Lebanon, the EduTA team, accompanied by the local counterpart, Dr. Rola Bou Khozam from LAEC, visited the following facilities and laboratories:

- The American University of Beirut Medical Center (AUBMC) with the Rafic Hariri School of Nursing;
- The Middle East Institute of Cancer Hospital, Beirut;
- The Mount Lebanon Hospital, Beirut.

The opening session of the mission took place at the LAEC premises on the second day of the mission. The EduTA team was welcomed by the Lebanese officials: Dr. Rola Bou Khozam (LAEC, Quality Manager – Office report to the Director), Dr. Hanna Al Balaa (LAEC, Department Head – Radiation Safety Services, PGEC programme), Dr. Omar El Samad (LAEC, Department Head – Environmental Radiation Control, PGEC programme), Dr. Mr. Hassan Bsar (Section Head, Authorization, Inspection and Regulations Department), Dr. Mrs Leila el Nashef (LAEC, Authorization, Inspection and Regulations Department), and Dr. Dr. Salam Nouredine from Beirut Arab University.

The EduTA team presented the scope and objectives of the mission, the procedure for conducting the mission and the mission programme which was approved. The EduTA team also presented the EduTA questionnaire and the IAEA’s draft document on the methodology to establishing a national strategy according to the “IAEA Strategic Approach to education and training in radiation, transport and waste safety, 2011 – 2020”.

The Lebanese counterpart, Dr. Rola Bou Khozam made a presentation on education and training in radiation protection in Lebanon. Dr. Omar El Samad presented the Diploma in Radiation Protection conducted at the Beirut Arab University in collaboration with LAEC, and Dr. Hassan Bsar presented an overview about the legal and regulatory framework in Lebanon, with particular emphasis on education and training aspects.

After the presentations, the information provided to the EduTA team by the host organization prior to the mission, was discussed in detail, explanations on completing the questionnaire were given by the EduTA team and additional information was requested where necessary. Numerous documents were provided to the team.

According to the mission programme, the EduTA team also visited some other facilities and laboratories having or collaborating in courses in the field of radiation protection and safety, or being considered as possible facilities for demonstrations and visits:

- Lebanon Atomic Energy Commission (LAEC) premises and laboratories;
- The Saint Familie Institute;
- The Lebanese German University (LGU);
- The Ciment De Sibline industry.

On the last day, an exit meeting was held with the Lebanese officials at the LAEC headquarters. The EduTA team leader presented a brief outcome of the five-day assessment. Conclusions and recommendations suggestions were agreed with the counterpart.

A full technical report with the findings, recommendations and a work plan was provided to the mission’s counterpart and the national authorities.