



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**

PREPARATORY MISSION

PAKISTAN

10 - 15 November 2013

COMPOSITION OF THE IAEA APPRAISAL TEAM

1. Andrea Luciani, Team Coordinator, IAEA.
2. Panagiotis Dimitriou, Senior Expert, Team Leader, Greece.
3. Zulkifli M. Hashim, Senior Expert, Malaysia.

PERSONS MET DURING THE PREPARATORY MISSION

Name	Designation
PNRA	
Muhammad Iqbal	Member (Corporate)
Abdul Mannan	Secretary PNRA
Zaheer Ayub Baig	Director General (Corporate)
Nusrat Iqbal Warsi	Director General (Investigation and Enforcement)
Shafqat Hayat	Acting Director General (Technical)
Muhammad Ayub	Acting Director General (Capacity Building)
Saleem Zafar	Director (International Coordination Directorate)
Ansar Hussain Shamsi	Advisor to Chairman
Dr. Muhammad Sadiq	Director (Nuclear Security Action Plan)
Muhammad Munir	Director (Waste and Transport Safety Directorate)
Dr. Ameena Bano	Head (Radiation Safety Directorate)
Hafiz Naeem	Principal Engineer
Asad Ejaz Goraya	Principal Scientific Officer
Saeed Ahmad	Principal Engineer
Muhammad Nadeem	Senior Scientific Officer
Moazzam Shahzad	Senior Engineer
Ahsan Qadeer	Senior Engineer
Ammar Mehdi	Senior Engineer
Zahid Rasheed	Senior Scientific Officer
PAEC	
Dr. Fayyaz Ahmad	Director Medical Sciences
PIEAS	
Dr. Shakil-ur-Rahaman	Assistance Professor
Dr. Muhammad Ilyas	Assistance Professor
Dr. Masroor	Assistance Professor
COMSAT	
Dr. Khalid Jamil	Professor
Dr. Shahid Manzoor	Professor

BACKGROUND

On request of the Pakistan Nuclear Regulatory Authority (PNRA), the IAEA's Technical Cooperation Division for Asia and the Pacific region organized, in March 2013, meetings between a representative of PNRA and officers from the IAEA Division of Radiation, Transport and Waste Safety. The purpose of the meeting was to explore ways to provide assistance for strengthening and upgrading the education and training capabilities in the field of radiation protection and safe use of radiation sources.

An Education and Training Appraisal (EduTA) was agreed to be conducted on 11-15 November 2013 under the Technical Cooperation national project PAK9035. On September 2013, the EduTA questionnaire was sent to the PNRA counterpart. After a preliminary analysis of the questionnaire, the PNRA counterpart deemed to be able to provide in due time only the Module A of the EduTA questionnaire, suggests to organize a workshop on the establishment of a national strategy for education and training in radiation, transport and waste safety, to facilitate the completion of Module B, to be provided later on. 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 IAEA, has been completed by two Pakistani institutions (Pakistan Institute of Engineering and Applied Sciences: PIEAS; Commission on Sciences and Technology for Sustainable Development in South: COMSATS) that are hosting postgraduate programmes (e.g. Master of Science) in areas relevant to the IAEA PGEC syllabus. For that reason, this module was used as a tool to collect and collate information about national capabilities at postgraduate level in the field of radiation protection and safety, and was not considered as part of the appraisal mission.

Given the above mentioned conditions and limitations, the PNRA counterpart and the EduTA team agreed on the first day of the mission during the opening meeting, to consider the mission as a preparatory EduTA. It was agreed to complete the EduTA later on, by organizing a second mission or by resubmitting the revised modules of the EduTA questionnaire, on the basis of the outcomes of the preparatory mission.

TERMS OF REFERENCE OF THE PREPARATORY EduTA MISSION

The terms of reference for this preparatory mission were:

- To revise and review, together with the counterpart, the information provided in Module A of the EduTA questionnaire on the legal and regulatory framework for education and training in radiation protection and safety.
- To conduct a workshop on the establishment of a national strategy for education and training in radiation, transport and waste safety, to facilitate the subsequent completion of Module B of the EduTA questionnaire.
- To collect the information about national capabilities at academic and non-academic level using Module C of the EduTA questionnaire.
- To provide 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 PREPARATORY MISSION

Mr. Muhammad Iqbal, Member Corporate, welcomed the EduTA team in the Headquarters of the PNRA in the presence of Mr Abdul Mannan, Secretary PNRA, Mr Zaheer Ayub Baig, Director General Corporate, Mr Muhammad Ayub, Acting Director General Capacity Building, Mr Muhammad Saleem Zafar, Director International Corporation, Mr Ansar Hussain Shamsi, Advisor and other members of the PNRA management and staff, and representatives of the education and training providers (PNRA-NISAS, PIEAS, COMSATS and PAEC HQ). The Member Corporate,

Advisor and Director General referred to the long-term commitment of PNRA in the field of radiation protection and safety, including education and training, and expressed their wishes for a fruitful mission.

Mr Muhammad Ayub from PNRA and the representatives of PIEAS, COMSATS and PAEC NM&O Hospitals, presented an overview of their institutions and activities in the field of education and training, focussing on radiation protection and safety.

The EduTA team generally briefed the hosts about the mission as well as about the conduction of a one day workshop on the “Establishment of a National Strategy on E&T”. The objectives of the mission were presented and the procedure for conducting the mission and its agenda were agreed.

The information provided to the team members 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. During the mission, numerous documents were provided to the team.

During the five day mission, the EduTA team continued discussions with the host, and visited facilities and laboratories. The team visited the facilities at:

- PNRA-NISAS, and the relevant laboratories (Coordination Center Emergency Response, Nuclear Security, Physical Protection Laboratory, Nuclear Safety, NDT Laboratory, Mechanical Laboratory, Radiochemistry Separation Laboratory, External Dosimetry Laboratory, Radon Monitoring laboratory, Internal Dosimetry Laboratory, Simulator of NPPs Control Room) and Library;
- PIEAS, and the relevant laboratories (Mobile Monitoring Station, Radiation Interaction and Detection, Health Physics, Medical Physics, Radiation Shielding, teleconference room, Hazardous Air Pollutants, Characterization and Control, Environmental Monitoring, PWR Simulator, Nuclear Medicine and Oncology);
- COMSATS and the relevant laboratories (Radon Monitoring, Health Physics, Radiation Physics).

During the fourth day of the mission the workshop on the establishment of national strategies for education and training, according to the “IAEA Strategic Approach to education and training in radiation, transport and waste safety, 2011 – 2020”, was conducted. The EduTA team presented the IAEA’s draft document on the methodology to establishing a national strategy as well as the experience gained by Greece and Malaysia which have made significant steps so far in this area.

An exit meeting was held with the management team at the PNRA Headquarters. The EduTA team leader presented a brief outcome of the four–day assessment. Preliminary conclusions and suggestions were agreed with the local counterpart.

A full technical report with the preliminary findings and recommendations was provided to the mission’s counterpart and the national authorities. A full scope EduTA mission is under planning.