



IAEA

International Atomic Energy Agency

Atoms for Peace and Development

**DEPARTMENT OF NUCLEAR SAFETY AND SECURITY
DIVISION OF RADIATION, TRANSPORT AND WASTE SAFETY**



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

INDONESIA

11 – 15 November 2019

APPRAISAL TEAM - PARTICIPANTS

Appraisal Team

Joanne Stewart	UK (team leader, expert)
Essa Alkhalaylah	Jordan (expert)
Andrea Luciani	IAEA (team coordinator)

List of Participants

BATAN

Sudi Ariyanto	Center for Education and Training	Director
Nazly Kurniawan	Center for Multipurpose Reactor	Head of Occupational Safety and Radiation Protection Subdivision
Djuartini Saleh	Center for Education and Training	Head of Program & Evaluation Division
Pramaning Tri Hastari	Center for Education and Training	Head of Program Subdivision
Widodo Soemadi	Center for Education and Training	Head of Education-training Cooperation Subdivision/Training Instructor
Tulisna	Center for Education and Training	Head of Evaluation Subdivision
Arie Budianti	Center for Radioactive Waster Management	Radiation Protection Officer at Safety Division
Maria Christina Prihatiningsih	Polytechnic of Nuclear Technology – BATAN	Lecturer
Rini Rindayani	Center for Education and Training	Training Lecturer/Instructor
Tito Wahyu Purnomo	Center for Education and Training	Staff of Education-training Cooperation Subdivision/Training Instructor
Miranti Indriani	Center for Education and Training	Staff of Program Subdivision
Rima Agustin Merdekawati	Center for Education and Training	Staff of Evaluation Subdivision
Slamet Wiyuniati	Center for Education and Training	Staff of Implementation Division/ Senior RPO in CET BATAN/ Lecturer
Nadya Lailyshofa	Center for Education and Training	Staff of Implementation Division
Bagiyono Moechsin	Center for Education and Training	Lecturer

BAPETEN

Lukman Hakim	Center for Education and Training	Director
Rizal Anggabrata	Education & Training Center	Head of Program and Evaluation Section
Widia Lastana Istanto	Directorate for Licensing for Nuclear Installation and Material	Head of Certification and validation Sub directorate
Rini Suryanti	Directorate of Technical Support and Nuclear Emergency Preparedness	Head of Quality Assurance Section
Kristyo Rumboko	Directorate of Regulation for Radiation Facilities and Radioactive Sources	Staff of Regulation for Medical, Industrial and Research Facility Sub Directorate
Supriyatno	Directorate of Licensing for Radiation Facility and Radioactive Material	Staff of Licensing for Research and Industrial Facility Sub Directorate
Puji Hastuti	Directorate of Licensing for Radiation Facility and Radioactive Material	Staff of Licensing for Radiation Facility Personnel Sub Directorate
Deddy Rusdiana	Directorate of Technical Support and Nuclear Emergency Preparedness	Staff of Quality Assurance Sub directorate

Ministry of Health

Agung Nugroho Oktavianto	Directorate of Health Service Facility	Head of Others Health Service Facility Equipment Section
Dian Martiningrum	Directorate of Health Service Facility	Staff of Others Health Service Facility Equipment Section

Universities

Andang Widiharto	Department of Nuclear and Physics Engineering – GadjahMada University	Head of Nuclear Engineering Program / Lecturer
I Putu Eka J	Academy of Engineering Radiodiagnostic and Radiotherapy (ATRO) Bali	Head of Department DIII TRR
Ardi Soesilo Wibowo	Polytechnic of Health – Semarang	Head of Department DIII TRR
Lukmanda Evan Lubis	Faculty of Mathematic and Natural Sciences - University of Indonesia	Lecturer
Lailatul Muqmiroh	Airlangga University	Chief of Education & Training
Arif Jauhari	Polytechnic of Health – Jakarta	Coordinator of International Cooperation

BACKGROUND

In January 2019 the director of the Center for Education and Training in the National Nuclear Energy Agency of Indonesia (BATAN), Mr Sudi Ariyanto, sent a letter to Mr Peter Johnston, Director of the IAEA Division of Radiation, Transport and Waste Safety, requesting to carry out an Education and Training Appraisal mission in radiation protection and the safety of radiation sources (EduTA).

After some preliminary contacts between the Indonesian counterpart and the IAEA contact point for the mission, the questionnaire was sent out to BATAN with the request to fill out the core modules (Module A on the legal and regulatory framework for education and training, Module B on the national strategy for education and training), and encouraging to fill out the additional module as well (Part C on the provisions for the PGEC), in order to provide information on national initiatives to build competence at postgraduate level in the field of radiation protection and safety.

A preliminary questionnaire with the responses and supporting documents was sent back to the IAEA contact point in August 2019 for a first assessment. The IAEA contact point provided the Indonesian counterpart with some preliminary remarks on how to amend the information provided and the supporting documents in order to properly address some of the questions. A new completed questionnaire with additional supporting documents was sent back to the IAEA contact point in October 2019: this version was shared with the EduTA team; some final clarifications were requested before the mission.

The EduTA mission was conducted from 11 to 15 November 2019 under the IAEA Technical Cooperation project RAS/9/081 “Providing Education and Training in Radiation Safety in the Asia-Pacific Region”.

OBJECTIVES 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;
- 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 Standards and Guides relevant to the scope of the appraisal.

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

- To 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;
- To provide an opportunity to continuously improve the provisions and overall infrastructure for education and training in radiation protection and safety.

CONDUCT OF THE MISSION

The EduTA mission was conducted according to the agreed mission programme. Representatives from different national stakeholders were met during the mission. The opening session took place on the first day of the mission at the conference room of the hotel where the EduTA team was accommodated. The

EduTA team was welcomed by Mr. Sudi Ariyanto, director of the Center for Education and Training in BATAN.

Mr. Sudi Ariyanto provided a presentation on the human resources and infrastructures for education and training in radiation protection in Indonesia. Mr Lukman Hakim provided an overview on the regulatory framework in Indonesia, followed by a detailed presentation on the certification system of training institutions, provided by his staff Ms Rini Suryanti. Mr Andi Saguni from the Ministry of Health provided a presentation on Indonesian national health programmes related to medical uses of radiation. The EduTA team leader presented the objectives of the mission and provided an overview on the questionnaire used to collect the relevant information for the mission.

After the presentations, and during the week, the information provided to the EduTA team by the counterparts prior to the mission was discussed in detail. Clarification on aspects of the questionnaire was provided and additional information was requested where necessary. During the technical visits (Appendix 1), presentations were provided by Mr Arif Jauhari, from Health Polytechnic of Health Ministry, and Mr Lukmanda Evan Lubis, from the University of Indonesia. During the visits additional documents and evidence were provided to the EduTA team.

On the last day, an exit meeting was held with all the counterparts. The EduTA team leader presented a brief outcome of the assessment. Conclusions, recommendations and suggestions were agreed upon with the counterpart. An action plan was drafted subsequent to the completion of the mission, identifying the responsible organizations and the time frame for addressing the recommendations.