

Asian Nuclear Safety Network Education and Training Topical Group
Regional Workshop on the Management of Training Systems for Nuclear and Radiological
Safety

6-10 November 2023

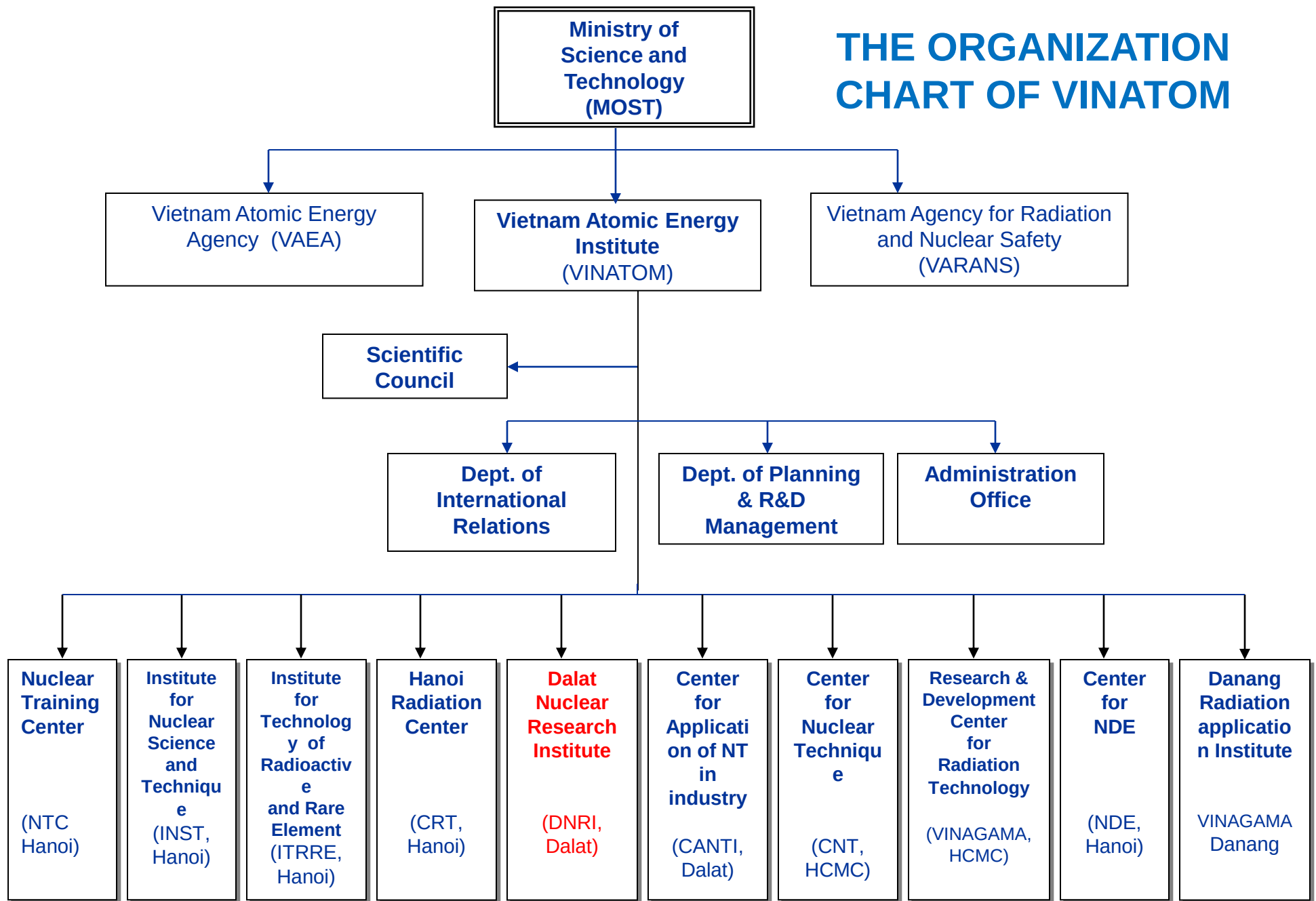
PNRI, Manila, Philippines

Training Systems for Nuclear and Radiological Safety

Viet Nam

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THE ORGANIZATION CHART OF VINATOM



INTRODUCTION DNRI

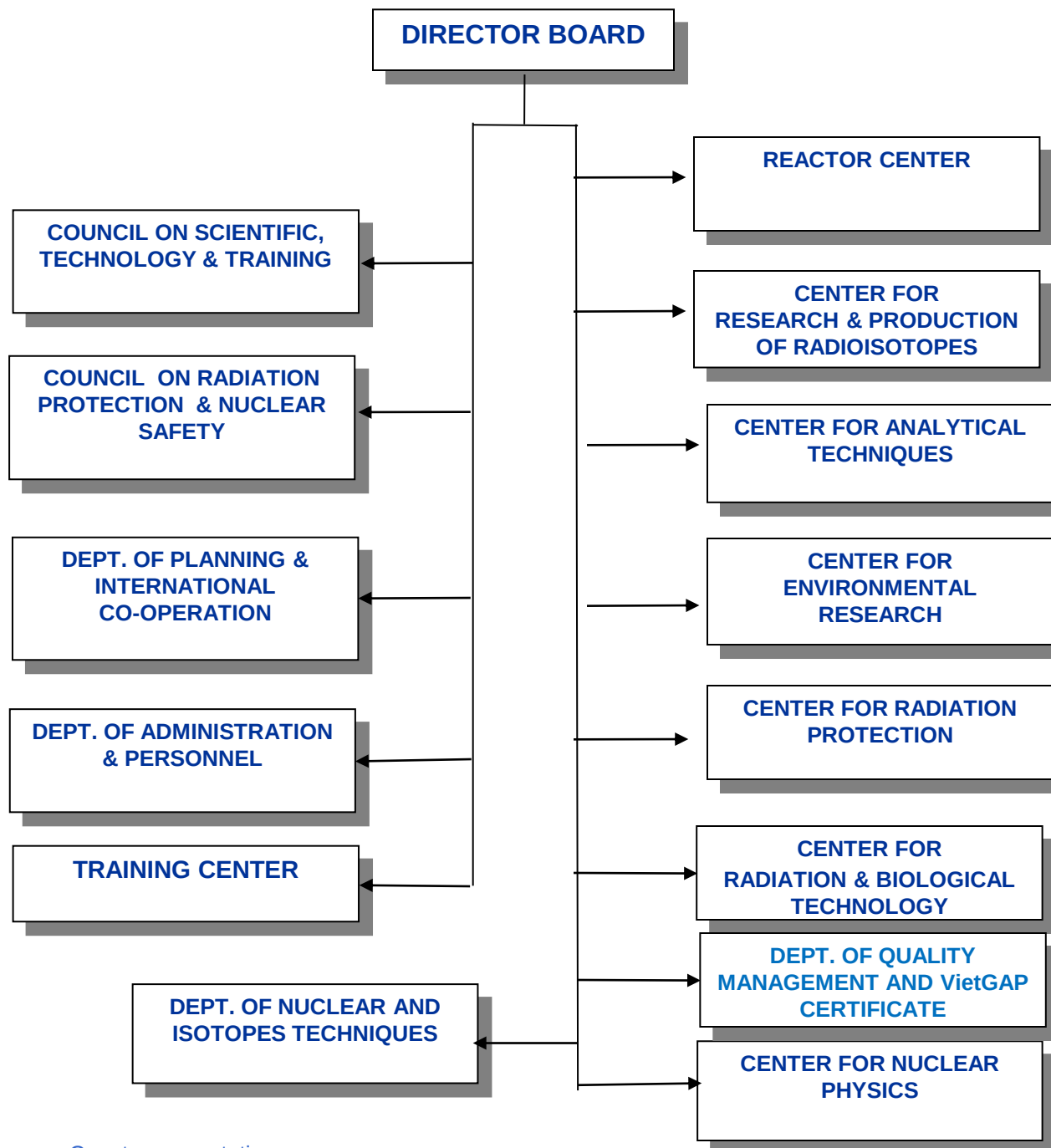
Dalat Nuclear Research Institute (DNRI) is located in Dalat city, 120km far from nearest coastline, 1500 m from sea level, with 500-kW Research Reactor (TRIGA Mark II)



Dalat Nuclear Reactor



THE ORGANIZATION CHART OF DNRI



National strategy on education and training in nuclear and radiation safety

Objectives

- Training researcher and lecturers on nuclear and radiation safety at high level in theory and practice.
- Training nuclear and radiation safety management staff from central level to sectors and localities. This team must be fully equipped with knowledge of legal regulations, radiation safety and control measures as well as radiation safety management skills.
- Training on Radiation safety for all radiation workers nationwide, testing their knowledge and issuing certificates
- Create the safety culture for radiation workers and those working in nuclear and radiation field.

National strategy on education and training in nuclear and radiation safety

+ Main national institutions involved

- Ministry of Science and Technology (MOST)
- Vietnam Agency for Radiation and Nuclear Safety (VARANS)
- Vietnam Atomic Energy Agency
- Vietnam Atomic Energy Institute (VINATOM)
 - + Dalat Nuclear Research Institute (DNRI)
 - + Institute for Nuclear Science and Technology (INST)
 - + Center for Non-destructive Evaluation (NDE)
 - + Center for Nuclear Technologies (CNT)

❖ Companies

National strategy on education and training in nuclear and radiation safety

Responsibilities for the implementation of the national strategy on E&T

- Law on Atomic Energy (No.18; 2008)
- Decree on Implementation of radiation related to affairs and provision auxiliary services for atomic energy application (No.142; 2020)
- Circular: Regulations on training in radiation safety for radiological workers, safety officers, and provision of radiation safety training services (No.34, 2014)
- Decree on administrative sanctions of violations in the field of atomic energy (No. 107; 2013)

National strategy on education and training in nuclear and radiation safety

Activities :

- Organizing many radiation protection training course for radiation workers (hospitals, industry companies,...)
- Follow-up training courses on Nuclear and Radiological Emergency Preparedness; Environmental Radioactivity Monitoring and Reactor Engineering (coordinate with JAEA/Japan) (every year)
- Organize drills to response to nuclear and radiological incident every year in facilities and provincial level
- Organize dissemination of legal documents related to nuclear and radiation safety (every year by VARANS)

National strategy on education and training in nuclear and radiation safety

Activities :

- Participate in implementing regional cooperation projects:
 - + RAS9094: Enhancing Nuclear Emergency Preparedness and Response in the Member States of the Association of Southeast Asian Nations
 - + RAS9092: Strengthening the Capacity to Respond to Radiological Emergencies of Category II and III Facilities
 - + RAS9093: Strengthening Technical Services in Occupational Radiation Protection in Compliance with the International Basic Safety Standards

National strategy on education and training in nuclear and radiation safety

Activities :

- Participate Instructor Training Course (ITC) and Advance ITC on Nuclear and Radiological Emergency Preparedness and Environmental Radiological Monitoring in JAEA/Japan

❖ Ideas:

- + Install GPS positioning system for high-activity radioactive source (category 1, 2 and 3).
- + Extracurricular activities on radiation and nuclear safety for primary, secondary and high school.

Systematic approach to training

Status of SAT at your organization

- The training program for students, graduate students in nuclear physics and nuclear technology includes:
 - + Knowledge for nuclear and radiation safety;
 - + Safety culture.
- The training program for radiation worker, researcher, postgraduate:
 - + Legal documents on nuclear and radiation safety;
 - + Safe management of radioactive substances;
 - + Safe transportation of radioactive sources;
 - + Safety culture.

Systematic approach to training

Status of SAT at your organization

- The training program for managers from central to local levels:
 - + Legal documents on nuclear and radiation safety;
 - + Safe management of radioactive substances;
 - + Safe transportation of radioactive sources;
 - + Safety culture.
- The training program for radiation workers is designed specifically for each specific subject: Radiation workers in healthcare, industry, research agencies, and facilities using nuclear reactors.

Assessment of competence needs

- + Methodology, means and tools for competence assessment and management
 - ISO 9001:2015
 - Independent experts
 - Direct observation
 - Answers to questions (Experiential Questions,...)
 - Interview
 - etc.

Training management

Management of training at your organization

- Training is an important part of the quality management system - QMS (ISO 9001:2015), and this QMS is monitored every year and reassessed every 3 year
- Training on nuclear and radiation safety and certification for new employees and repeat training after 3 years (according to the Law of Nuclear Energy and circular No.34)
- Transfer knowledge and experience between the younger and older generation (seminar, internal training, write documents for next generation,...)
- Conducting seminars after attending foreign training courses and transfer documents to the archives department.

Training management

- ✚ Status of training material
 - topical areas:
 - + Nuclear and radiation safety
 - + Safety analysis
 - + Safety culture
 - + Safety in research reactor operations
 - + Materials in NREP, ERM, RE
 - + Legal documents
 - + etc.
 - updating process: every year or new changes, IAEA, ICRP, UNCEAR,...
- Availability of training packages
 - FTC on NREP, ERM, RE
 - Training program for nuclear and radiation safety and certification for new employees and radiation workers
 - Materials for teaching student and graduate students.

Challenges in education and training

At national level

- The background knowledge of radiation workers is different.
- The information portal on nuclear and radiation safety has not yet received adequate investment attention.
- Human resources in the nuclear energy field are quite small and there are not many people capable of teaching and imparting knowledge.
- Many managers still do not care much about nuclear and radiation safety.
- Difficulty in organizing extracurricular activities on radiation and nuclear safety for primary, secondary and high school.
- Vietnam's documentation and regulatory system is sometimes still backward compared to the world

Challenges in education and training

+ At organizational level

- Difficulties in knowledge transfer process
- The background knowledge of staffs is different
- Working habits
- It is difficult to arrange time to organize long-term training courses.

Future plans in education and training

At national level

- Standardize the system of materials and legal documents based on compatibility with international regulations and the Vietnamese context.
- Organizing extracurricular activities on radiation and nuclear safety for primary, secondary and high school.

At organizational level

- Develop an effective knowledge transfer strategy
- Create safe working habits for staffs
- Basic training for employees with no background in radiation and nuclear safety

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Thank you!